

1 / 24

Molecular  
weight scale +

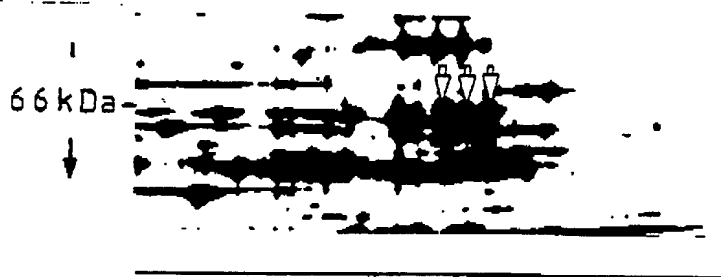


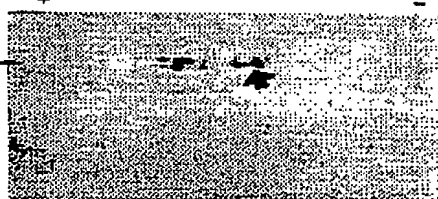
FIG. 1A

66 kDa -



FIG. 1B

66 kDa -

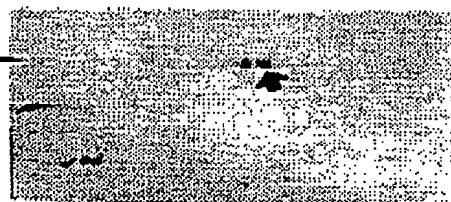


ULIP family

FIG. 2A

Molecular  
weight scale ↓

66 kDa -



CV<sub>2</sub> antigen (POP 66/ULIP4)

FIG. 2B

2/24

a b c d

94-

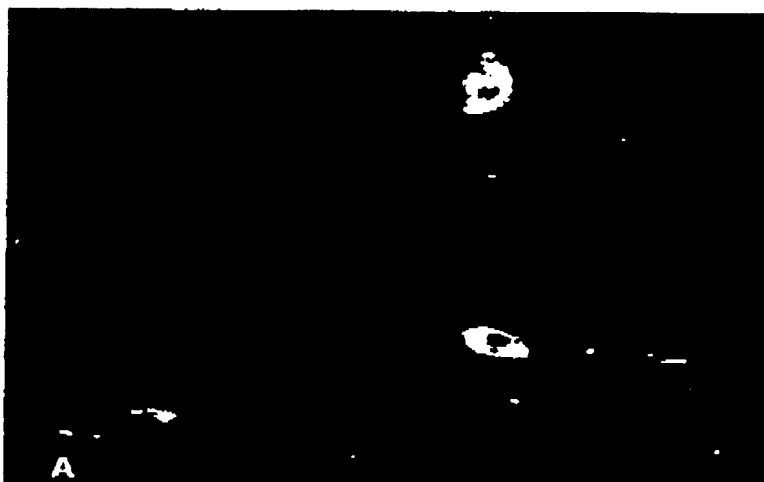
66-



4

FIG. 3

3/24

FIG. 4AFIG. 4BFIG. 4C

4/24



FIG. 5A

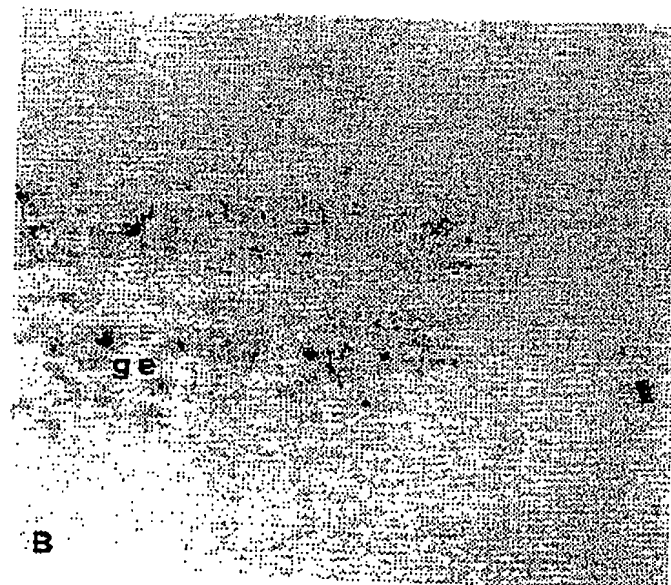


FIG. 5B

5/24

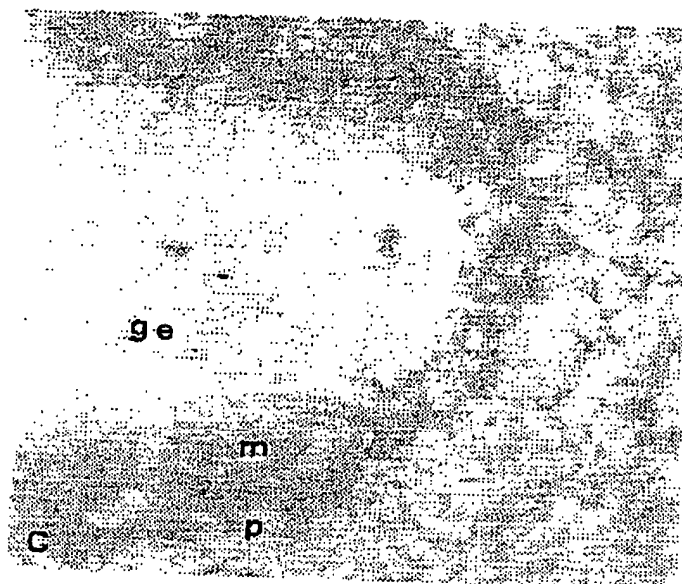


FIG. 5C

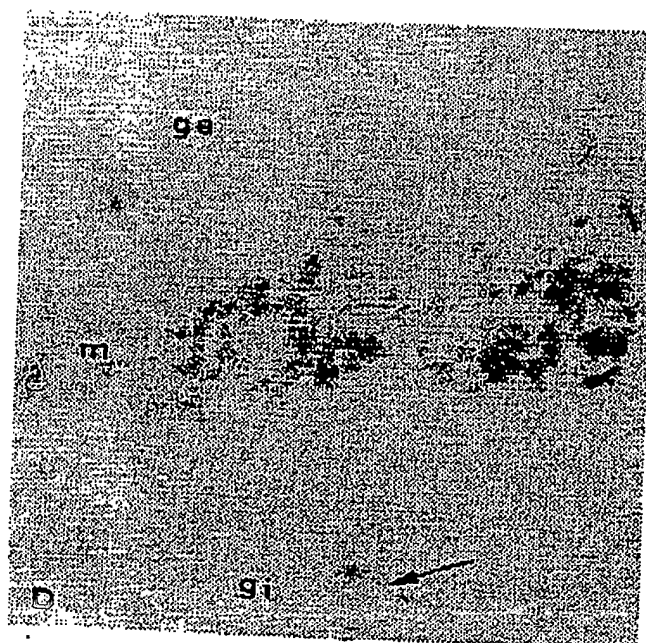


FIG. 5D

6/24

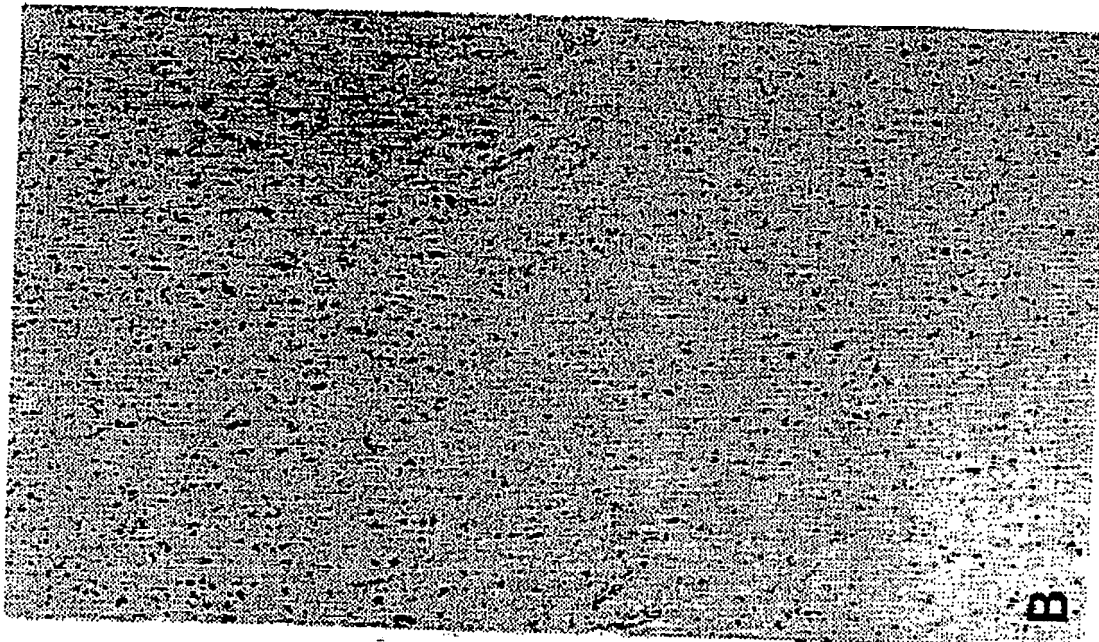


FIG. 6B

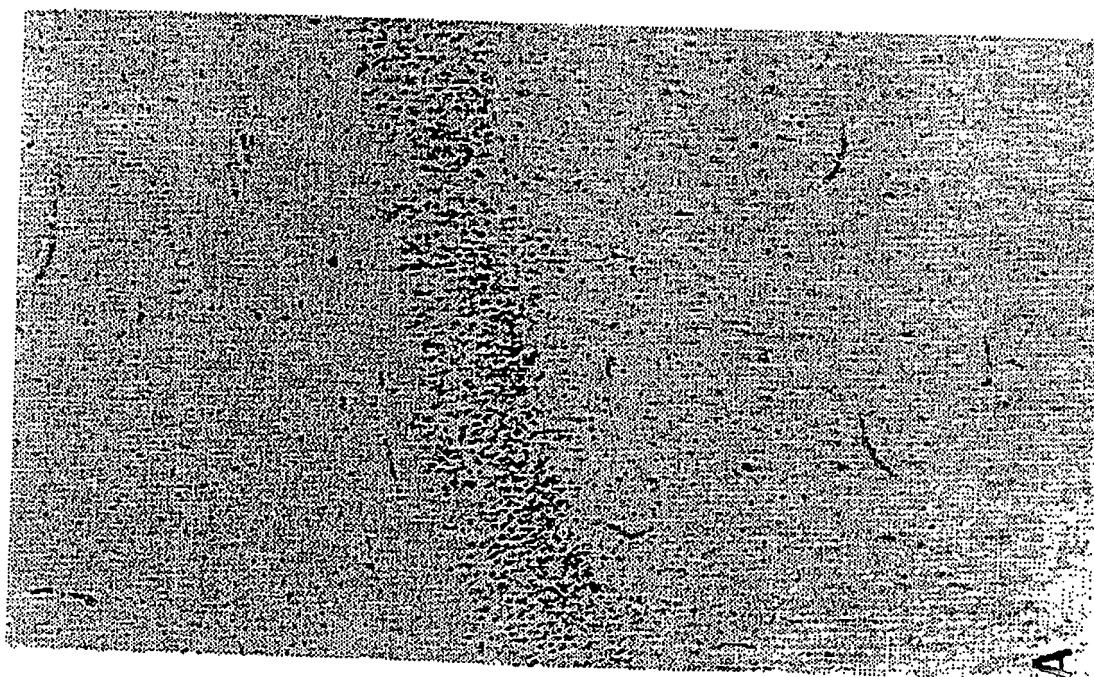
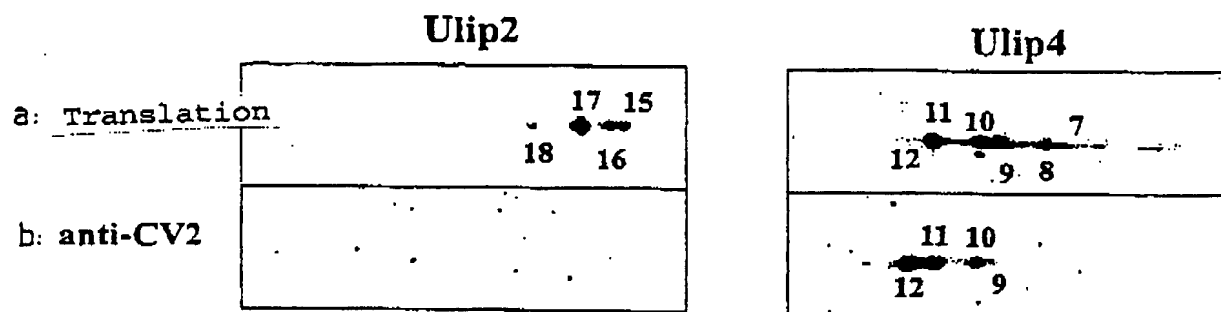
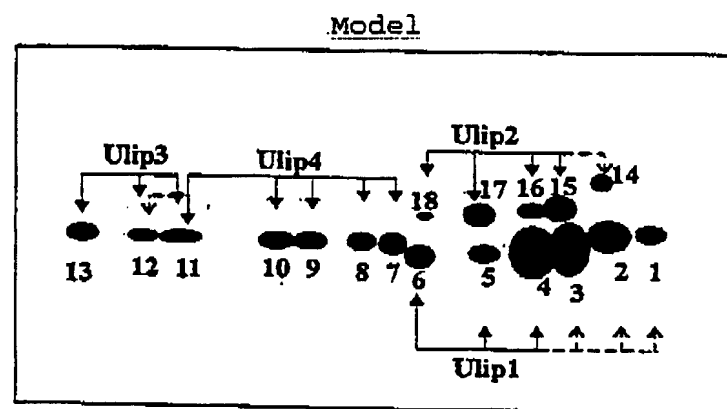


FIG. 6A

7/24

FIG. 7AFIG. 7BFIG. 7C

8/24

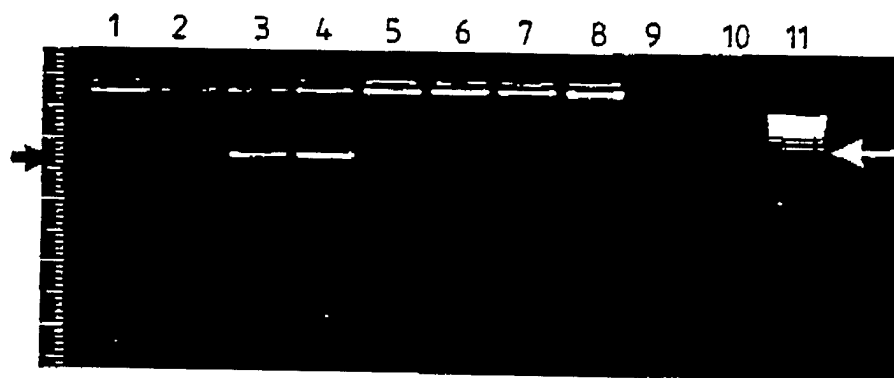


FIG. 8A

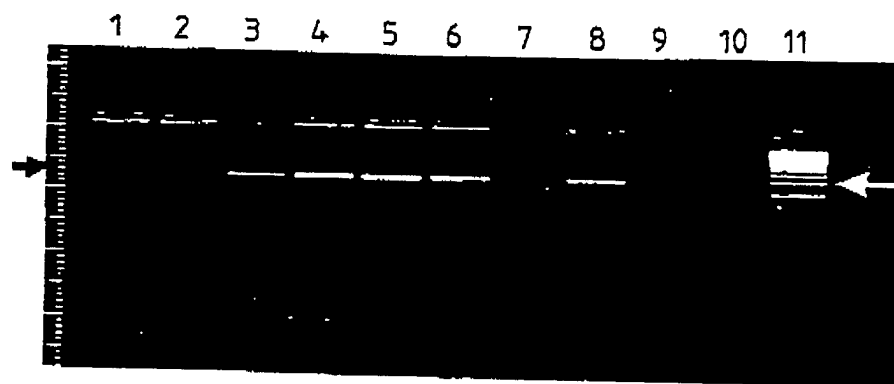


FIG. 8B



9/24

## DLIP2 mouse

M S Y Q G K K N I P P I 12  
 ctctcctcccccccgagag ATG TCT TAT CAG GGG AAG AAA AAT ATT CCA CCC ATC 58  
 T S D R L L I K G G K I V N D D Q S 30  
 ACG AGC GAT CGT CTT CTG ATC AAA GGT GGC AAG ATT GTG AAT GAT GAC CAG TCC 112  
 F Y A D I Y M E D G L I K Q I G E N 48  
 TTC TAT GCA GAC ATA TAC ATG GAA GAT GGG TTG ATC AAG CAA ATA GGA GAA AAC 166  
 L I V P G G V K T I E A H S R M V I 66  
 CTG ATT GTA CCA GGA GGG GTG AAG ACC ATC GAA GCC CAC TCC AGA ATG GTG ATT 220  
 P G G I D V H T R F Q M P D Q G M T 84  
 CCC GGA GGA ATT GAC GTG CAT ACT CGC TTC CAG ATG CCT GAC CAG GGA ATG ACA 274  
 S A D D F F Q G T K A A L A G G T T 102  
 TCC GCT GAT GAC TTC TTC CAG GGA ACC AAG GCG GCC CTG GCC GGG GGA ACC ACC 328  
 M I I D H V V P E P G T S L L A A F 120  
 ATG ATC ATT GAC CAT GTT GTT CCT GAG CCC GGG ACG AGC CTA TTG GCT GCC TTT 382  
 D Q W R E W A D S K S C C D Y S L H 138  
 GAT CAG TGG AGG GAG TGG GCT GAC AGC AAG TCC TGC TGT GAC TAT TCG CTG CAC 436  
 V D I T E W H K G I Q E E M E A L V 156  
 GTG GAC ATC ACT GAG TGG CAC AAG GGC ATC CAG GAG ATG GAA GCT CTG GTG 490

FIG.9

10/24

K D H G V N S F L V Y M A F K D R F 174  
AAG GAC CAC GGG GTA AAC TCC TTC CTG GTG TAC ATG GCT TTC AAA GAT CGA TTC 544

Q L T D S Q I Y E V L S V I R D I G 192  
CAG CTG ACG GAT TCC CAG ATC TAT GAA GTG CTG AGC GTG ATC CGG GAT ATC GGT 598

A I A Q V H A E N G D I I A E A Q Q 210  
GCC ATA GCT CAA GTC CAC GCA GAG AAT GGT GAC ATC ATT GCT GAG GCA CAG CAG 652

R I L D L G I T G P E G H V L S R P 228  
AGG ATC CTG GAT CTG GGC ATC ACG GGC CCC GAG GGA CAC GTG TTG AGC CGG CCA 706

E E V E A E A V N R S I T I A N Q T 246  
GAG GAG GTC GAG GCT GAA GCT GTG AAC CGG TCC ATC ACT ATT GCC AAC CAG ACC 760

N C P L Y V T K V M P K S A A E V I 264  
AAC TGC CCT CTG TAT GTC ACC AAA GTG ATG CCC AAG AGT GCG GCT GAA GTC ATC 814

A Q A R K K G T V V Y G E P I T A S 282  
GCT CAG GCA CGG AAG AAG GGA ACT GTG GTG TAT GGT GAG CCC ATC ACG GCC AGC 868

L G T D G S H Y W S K N W A K A A A 300  
CTG GGG ACT GAT GGC TCT CAT TAC TGG AGC AAG AAC TGG GCC AAG GCT GCG GCC 922

F V T S P P L S P D P T T P D F L N 318  
TTT GTC ACC TCC CCA CCC TTG AGC CCC GAC CCA ACC ACT CCA GAC TTT CTC AAC 976

S L L S C G D L Q V T G S A H C T F 336  
TCG TTG CTG TCC TGT GGA GAC CTC CAA GTC ACT GGC AGT GCC CAC TGC ACC TTC 1030

FIG.9 continued

11/24

N T A Q K A V G G K D N F T L I P E G 354  
 AAC ACT GCC CAG AAG GCT GTG GGG AAG GAC AAC TTC ACC TTG ATT CCC GAG GGC 1084

T N G T E E R M S V I W D K A V V T 372  
 ACC AAC GGC ACT GAG GAG CGG ATG TCT GTG GAT ATT TGG GAT AAA GCT GTG GTC ACT 1138

G K M D E N Q F V A V T S T N A A K 390  
 GGG AAG ATG GAT GAG AAT CAG TTT GTG GCT GTG ACC AGC ACC AAC GCA GCC AAA 1192

V F N L Y P R K G R I S V G S D A D 408  
 GTC TTC AAC CTT TAC CCC CGG AAA GGT CGC ATC TCG GTG GGA TCT GAT GCT GAC 1246

L V I W D P D S V K T I S A K T H N 426  
 TTG GTC ATC TGG GAC CCT GAC AGT GTG AAG ACC ATC TCT GCC AAG ACA CAC AAC 1300

S A L E Y N I F E G M E C R G S P L 444  
 AGT GCT CTT GAG TAC AAC ATC TTT GAA GGC ATG GAG TGT CGC GGC TCC CCA CTG 1354

V V I S Q G K I V L E D G T L H V T 462  
 GTG GTC ATC AGC CAG GGC AAG ATT GTC CTG GAG GAC GGC ACA CTT CAT GTC ACT 1408

E G S G R Y I P R K P F P D F V Y K 480  
 GAA GGC TCA GGA CGC TAC ATT CCC CGG AAG CCC TTC CCT GAC TTT GTG TAC AAA 1462

R I K A R S R L A E L R G V P R G L 498  
 CGC ATC AAA GCA AGG AGC AGG CTG GCT GAG CTG AGA GGG GTC CCT CGT GGC CTG 1516

Y D G P V C E V S V T P K T V T P A 516  
 TAT GAC GGA CCG GTA TGC GAG GTG TCT GTG ACG CCC AAG ACG GTG ACT CCA GCC 1570

**FIG.9** continued

12/24

[illegible]

**FIG. 9** continued

FIG. 10

14/24

S C C D Y S L H V D I T S W Y D G V 148  
TCC TGC TGT GAC TAT TCC CTC CAC GTG GAC ATC ACA AGC TGG TAT GAT GGT GTT 713

R E E L E V L V Q D K G V N S F Q V 166  
CGG GAA GAG CTG GAG GTG CTG GTG CAG GAC AAA GGT GTC AAC TCC TTC CAA GTC 767

Y M A Y K D L Y Q M S D S Q L Y E A 184  
TAC ATG GCG TAT AAG GAC GAC CTG TAC CAG ATG TCT GAC AGC CAG CTG TAT GAA GCC 821

F T F L K G L G A V I L V H A E N G 202  
TTC ACC TTC CTT AAG GGT TTG GGA GCT GTG ATC TTA GTC CAT GCA GAA AAT GGA 875

D L I A Q E Q K R I L E M G I T G P 220  
GAT TTG ATA GCT CAG GAA CAA AAA CGG ATC CTG GAG ATG GGC ATC ACG GGT CCC 929

E G H A L S R P E E L E A E A V F R 238  
GAG GGT CAT GCT CTG AGC AGA CCC GAG GAG CTG GAG GCC GAG GCT GTG TTC CGG 983

A I A I A G R I N C P V Y I T K V M 256  
GCT ATT GCC ATT GCA GGC CGG ATC AAT TGC CCT GTG TAC ATC ACC AAG GTC ATG 1037

S K S A A D I I A L A R K K G P L V 274  
AGC AAG AGT GCA GCG GAC ATC ATC GCA CTG GCC AGG AAG AAA GGC CCT CTT GTC 1091

F G E P I A A S L G T D G T H Y W S 292  
TTC GGT GAG CCC ATA GCC GCC AGC CTG GGA ACC GAT GGC ACC CAC TAC TGG AGC 1145

K N W A K A A A F V T S P P L S P D 310  
AAG AAC TGG GCC AAG GCA GCT GCA TTT GTG ACT TCC CCT CCC CTG AGC CCA GAC 1199

**FIG.10** continued

15/24

P T T P D Y L T S L L A C G D L Q V 328  
CCC ACC ACT CCT GAC TAC TTG ACC TCC TTG CTG GCC TGT GGA GAC TTG CAG GTC 1253

T G S G H C P Y S I A Q K A V G K D 346  
ACA GGT AGT GGC CAC TGT CCC TAC AGT ATT GCT CAG AAG GCT GTG GGC AAG GAC 1307

N F T L I P E G V N G I E E R M T V 364  
AAC TTC ACT CTG ATC CCT GAG GGT GTC AAT GGT ATA GAA GAG CCG ATG ACC GTT 1361

V W D K A V A T G K M D E N Q F V A 382  
GTC TGG GAC AAG GCA GTG GCT ACT GGC AAG ATG GAT GAG AAC CAG TTT GTA GCC 1415

V T S T N A A K I F N L Y P R K G R 400  
GTC ACC AGC ACC AAC GCA GCC AAG ATC TTC AAC CTG TAC CCG AGG AAA GGT CGG 1469

I A V G S D A D V V I W D P D K M K 418  
ATC GCT GTG GGC TCC GAT GCT GAC GTA GTC ATC TGG GAC CCA GAT AAG ATG AAG 1523

T I T A K S H K S T V E Y N I F E G 436  
ACC ATA ACA GCC AAA AGC CAT AAA TCA ACT GTG GAG TAC AAC ATC TTT GAG GGC 1577

M E C H G S P L V V I S Q G K I V F 454  
ATG GAG TGC CAC GGC TCC CCC CTG GTG GTC ATC AGT CAG GGC AAG ATT GTC TTT 1631

E D G N I S V S K G M G R F I P R K 472  
GAG GAT GGA AAC ATC AGT GTC AGC AAG GGC ATG GGC CGC TTC ATC CCT CGG AAG 1685

P F P E H L Y Q R V R I R S K V F G 490  
CCA TTC CCA GAG CAT CTC TAC CAG CGT GTC AGG ATC AGA AGC AAG GAT TTC GGC 1739

**FIG.10** continued

16/24

L H S V S R G M Y D G P V Y E V P A 508  
TTG CAT AGT GTT TCC AGG GGC ATG TAC GAT GGG CCT GTG TAC GAG GTG CCA GCT 1793

T P K H A A P A P S A E S S P S K H 526  
ACA CCC AAA CAT GCT GCT CCT GCT TCT TCT GCC GAA TCC TCG CCT TCT AAA CAC 1847

Q P P I R N L H Q S N F S L S G A 544  
CAA CCC CCA ATC CGG AAC CTC CAC CAG TCC AAC TTC AGC TTA TCA GGT GCC 1901

Q I D D N N P R R T G H R I V A P P 562  
CAG ATA GAT GAC AAC AAT CCA AGG CGT ACA GGC CAC CGC ATT GTG GCG CCC CCT 1955

G G R S N I T S L G \* 573  
GGT GGC CGC TCC AAC ATC ACC AGC CTC GGT TGA cctcagatgagccagatatgcaagagt 2015

gaaggattatgggaaaacgctccattccttttccggtgttttgaagccacagtttagttggtactgacgga 2087

ggggagattgagcgatgctcttctctgttttaggaagaagtgtactagtgtggtgtgttgcctgga 2159

agtcctctgcccacagtggtgtgttcacaccgactccacctcagagcatggtgccgtccgttttcccttcta 2231

gtgacccagggttagcatcgctctatactgttccctccactcctccatgaccctctgagtgatgg 2297

FIG.10 continued



17/24

ULP4 mouse

gctgactaatatgcttaaatcagcgggtcgccacgtctgtggtcggtacgtccacgcccgcgagccccctacc 72  
 gagacactcagcccgccgtgtatcagg ATG TCC TTC CAA GGC AAG AAG AGC ATT CCC 10  
 131  
 R I T S D R L L I K G G K I V N D D 28  
 CGG ATA ACG AGC GAC CGC CTT CTC ATC AAA GGT GGG AAG ATT GTG AAC GAT GAC 185  
 Q S F H A D L Y V E D G L I K Q I G 46  
 CAG TCC TTT CAT GCT GAT CTG TAT GTG GAA GAC GGT CTG ATT AAA CAA ATT GGA 239  
 E N L I V P G G I K T I D A H G L M 64  
 GAA AAT CTC ATC GTC CCT GGC GGC ATC AAA ACC ATC GAT GCT CAT GGC CTG ATG 293  
 V L P G G V D V H T R L Q M P V M G 82  
 GTG CTG CCT GGG GGA GTT GAC GTT CAC ACC CGG CTG CAG ATG CCT GTG ATG GGC 347  
 M T P A D D F C Q G T K A A L A G G 100  
 ATG ACC CCA GCT GAT GAT TTC TGT CAG GGC ACC AAG GCG GCT CTA GCA GGC GGG 401  
 T T M I L D H V F P D A G V S L L A 118  
 ACC ACC ATG ATA TTG GAC CAT GTG TTT CCT GAC GCT GGT GTG AGC CTG CTG GCA 455  
 A Y E Q W R D G G A GCA GAC AGC GCG GCC TGC TGT GAC TAC TCC 136  
 GCC TAT GAG CAG TGG CGG GAC GGA GCA GAC AGC GCG GCC TGC TGT GAC TAC TCC 509  
 L H V D I P R W H E S T K E E L E A 154  
 TTA CAT GTG GAC ATT CCT CGC TGG CAC GAG AGC ACC AAA GAA GAG CTG GAG GCC 563

FIG.11

18/24

L V R D K G V N S F L V F M A Y K D	172
CTA GTC AGG GAC AAA GGT GTG AAC TCC TTC CTG GTC TTC ATG GCA TAC AAG GAC	617
R C Q C T D G Q I Y E I F S L I R D	190
AGG TGC CAG TGT ACT GAC GGT CAG ATA TAT GAA ATC TTC AGC CTC ATC CGG GAC	671
L G A V A Q V H A E N G D I V E E E	208
CTG GGA GCT GTG GCC CAG GTG CAC GCA GAA AAT GGG GAC ATC GTG GAG GAG GAA	725
Q K R L L E Q G I T G P E G H V L S	226
CAG AAG CGC CTG CTG GAG CAA GGC ATC ACT GGT CCT GAG GGC CAT GTG CTC AGC	779
H P E E V E A E A V Y R A V T I A K	244
CAC CCA GAA GAG GTA GAG GCC GAG GCT GTG TAC AGA GCA GTC ACC ATT GCC AAG	833
Q A N C P L Y V T K V M S K G A A D	262
CAG GCC AAC TGC CCA CTA TAC TAC GTC ACC AAG GTG ATG AGC AAG GGT GCA GCT GAC	887
M V A Q A K R R G V V V F G E P I T	280
ATG GTT GCC CAA GCC AAG CAG AGG GGG GTG GTC GTC TTT GGG GAA CCT ATC ACT	941
A S L G T D G S H Y W S K N W A K A	298
GCC AGC CTG GGC ACT GAT GGC TCA CAC TAC TGG AGC AAG AAC TGG GCC AAG GCT	995
A A F V T S P P I N P D P T A D H	316
GCA GCC TTT GTC ACT TCA CCC CCT ATC AAC CCG GAC CCT ACT ACT GCA GAC CAC	1049
L T S L L S S G D L Q V T G S A H C	334
CTC ACC TCT CTG CTG TCC AGT GGG GAC CTC CAG GTG ACA GGC AGT GCC CAC TGC	1103

**FIG.11** continued

19/24

T F T T A Q K A V G K D N F T L I P 352  
ACC TTC ACT ACT GCC CAG AAG GCT' GTT GGC AAA GAC AAC TTC ACA CTG ATC CCC 1157

E V V N G I E E R M S V V W E K C V 370  
GAG GTA GTC AAC GGT ATA GAA GAG CGC ATG TCT GTG GTC TGG GAG AAA TGT GTG 1211

A S G K M D E N E F V A V T S T N A 388  
GCT TCA GGG AAA ATG GAC GAG AAT GAG TTC GTT GCC GTG ACC ACC ACA AAT GCT 1265

A K I F N F Y P R K G R V A V G S D 406  
GCC AAA ATC TTC AAT TTT TAC CCC AGG AAG GGG CGT GTG GCC GTG GGC TCT GAT 1319

A D L V I W N P R A T K V I S A K S 424  
GCT GAC CTG GTC ATC TGG AAC CCC AGG GCC ACG AAA GTC ATC TCT GCC AAG AGC 1373

H N L N V E Y N I F E G V E C R G V 442  
CAT AAC CTG AAT GTA GAG TAC AAC ATC TTT GAA GGA GTG GAG TGC CGA GGA GTG 1427

P T V V I S Q G R V V L E D G N L L 460  
CCC ACG GTG GTC ATA AGT CAG GGC AGA GTG CTG GAG GAC GGA AAC CTG CTT 1481

V T P G A G R F I P R K T F P D F V 478  
GTC ACT CCA GGG GCT GGC CGC TTC ATT CCC CGG AAG ACG TTC CCG GAC TTT GTC 1535

Y K R I K A R N R L A E I H G V P R 496  
TAT AAG AGG ATA AAG GCT CGC AAC AGG CTA GCA GAG ATC CAC GGT GTG CCT CGA 1589

**FIG.11** continued

20/24

G L Y D G P V H E V M L P A K P G S 514  
 GGC CTG TAC GAC GGC CCT GTG CAT GAA GTG ATG TTA CCT GCC AAG CCA GGA AGT 1643  
  
 G T Q A R A S C S G K I S V P P V R 532  
 GGC ACA CAG GCC CGT GCA TCC TGT TCA GGC AAG ATC TCA GTG CCA CCC GTG CGC 1697  
  
 N L H Q S G F S L S G S Q A D D H I 550  
 AAC CTG CAC CAG TCG GGG TTC AGC CTA TCT GGC TCT CAG GCT GAC GAT CAC ATT 1751  
  
 A R R T A Q K I M A P P G G R S N I 568  
 GCC AGA CGT ACG GCT CAG AAG ATC ATG GCA CCC CCC GGA GGA CGC TCC AAC ATC 1805  
  
 T S L S \*  
 ACG TCT CTT TCC TAG acttggggtcttggcaagctggtgctgtccccactggcagggtgtggtgggac 573  
 gactcagtcagttagctccttccttcttagattgttattgtgaaaggc 1920

**FIG.11** | continued

21/24

ULIP4 man

GCCGCCCTACCAGAGACCCCCAGGAGCAGG	ATG	TCC	TTC	CAG	GGC	AAG	AAA	AGC	ATC	CCC		10
												61
R I T S D R L L L I R G G R I V N D D												28
CGG ATC ACG AGT GAC CGC CTT CTG ATC AGA GGT GGG AGG ATC GTG AAT GAC GAC												115
Q S F Y A D V H V E D G L I K Q I G												46
CAG TCC TTT TAC GCT GAT GTG CAC GTG GAA GAT GGC TTG ATA AAA CAA ATC GGA												169
E N L I V P G G I * T I D A H G L M												64
GAA AAC CTC ATC GTC CCT GGG GGC ATC TAG ACC ATT GAC GCC CAC GGC CTG ATG												223
V L P G G V D V H T R L Q M P V L G												82
GTC CTT CCT GGT GGC GTT GAC GTC CAC ACA AGG CTG CAG ATG CCT GTC CTG GGC												277
M T P A D D F C Q G T K A A L A G G												100
ATG ACA CCG GCT GAC GAC TTC TGT CAG GGC ACC AAG GCA GCG CTA GCA GGA GGA												331
T T M I L D H V F P D T G V S L L A												118
ACC ACC ATG ATC TTG GAC CAC GTC TTC CCC GAC ACC GGT GTG AGC CTG CTG GCG												305
A Y E Q W R E R A D S A A C C D Y S												136
GCC TAC GAG CAG TGG CGG GAG CGG GCG GAC AGC GCG GCC TGC TGC GAC TAC TCC												439
L H V D I T R W H E S I K E L E A												154
CTG CAC GTG GAC ATC ACC CGA TGG CAT GAG AGC ATC AAG GAG GAG CTG GAG GCC												493

FIG.12

22/24

L V K K E K G G V N S F L V F M A Y K D	172
CTG GTC AAG GAG AAG GGT GTG AAC TCC TTC CTG GTC TTC ATG GCA TAC AAG GAC	547
R C Q C S D S Q M Y E I F S I I R D	190
CGG TGC CAG TGC AGC GAC AGC CAG ATG TAC GAG ATC TTC AGC ATC ATC CGG GAC	601
L G A L A Q V H A E N G D I V E E E	208
CTG GGG GCC TTG GCC CAG GTG CAC GCT GAG AAC GGG GAC ATC GTG GAG GAG GAG	655
Q K R L L E L G I T G P E G H V L S	226
CAG AAG CGG TTG CTG GAG CTC GGC ATC ACT GGC CCC GAG GGC CAC GTG CTC AGC	709
H P E E V E A E A V Y R A V T I A K	244
CAC CCC GAG GAG GTG GAG GCT GAG GCG GTG TAC CGA GCT GTC ACC ATC GCC AAG	763
Q A N C P L Y V T K V M S K G A A D	262
CAG GCA AAC TGC CCG CTG TAC GTG ACC AAG GTG ATG AGC AAG GGG GCG GCC GAC	817
A I A Q A K R R G G V V V F G E P I T	280
GCC ATC GCT CAG GCC AAG CGC AGA GGG GTG GTC GTG TTT GGG GAG CCC ATC ACC	871
A S L G T D G S H Y W S K N W A K A	298
GCC AGC CTG GGC ACC GAC GGT TCA CAC TAC TGG AGC AAG AAC TGG GCC AAG GCT	925
A A F V T S P P V N P D P T A D H	316
GCA GCC TTC GTC ACA TCA CCC CCT GTC AAC CCA GAC CCC ACC ACG GCA GAC CAC	979
L T C L L S S G D L Q V T G S A H C	334
CTC ACC TGC TTG CTG TCC AGC GGG GAC CTC CAG GTG ACA GGC AGC GCC CAC TGC	1033

**FIG.12** continued

23/24

T F T T A Q K A V G K D N F A L I P 352  
 ACC TTC ACC ACT GCC CAG AAG GCT GTG GGC AAG GAC AAC TTC GCG CTG ATC CCC 1087  
  
 E G T N G I E E R M S M V W E K C V 370  
 GAG GCC ACC AAC GGC ATT GAG GAG CGC ATG TCG ATG GTC TGG GAG AAA TGT GTG 1141  
  
 A S G K M D E N E F V A V T S T N A 388  
 GCC TCT GGG AAG ATG GAC GAG AAT GAG TTC GTC GCG GTG ACC AGT ACA AAT GCT 1195  
  
 A K I F N F Y P R K G R V A V G S D 406  
 GCC AAA ATC TTC AAT TTT TAC CCA AGG AAG GGG CGA GTG GCT GTG GGC TCT GAC 1249  
  
 A D L V I W N P K A T K I I S A K T 424  
 GCT GAC CTG GTC ATA TGG AAC CCC AAG GCC ACC AAG ATC ATC TCT GCC AAG ACC 1303  
  
 H N L N V E Y N I F E G V E C R G A 442  
 CAC AAT CTG AAC GTG GAG TAC AAC ATC TTC GAG GGA GTG GAG TGC CGG GGA GCG 1357  
  
 P A V V I S Q G R V A L E D G K M F 460  
 CCT GCC GTG GTC ATA AGT CAG GGC CGA GTG GCG CTG GAG GAC GGC AAG ATG TTT 1411  
  
 V T P G A G R F V P R K T F P D F V 478  
 GTC ACC CCG GGG GCG GGC CGC TTC GTC CCT CCG AAA ACA TTC CCG GAC TTT GTG 1465  
  
 Y K R I K A R N R L A E I H G V P R 496  
 TAC AAG AGG ATC AAA GCT CGC AAC AGG CTG GCG GAG ATC CAC GGT GTG CCC CGT 1519

**FIG.12** continued

24/24

G	L	Y	D	G	P	V	H	E	V	M	V	P	A	K	P	G	S	514
GGG	CTG	TAT	GAC	GGG	CCC	GTC	CAC	GAG	GTG	ATG	GTG	CCT	GCC	AAG	CCA	GGG	AGT	1573
G	A	P	A	R	A	S	C	P	G	K	I	S	V	P	P	V	R	532
GGC	GCT	CCG	GCC	CGC	GGC	TCC	TGC	CCA	GGC	AAG	ATC	TCC	GTG	CCT	CCT	GTG	CGC	1627
N	L	H	Q	S	G	F	S	L	S	G	S	Q	A	D	D	H	I	550
AAC	CTA	CAT	CAG	TCG	GGG	TTC	AGC	CTA	TCT	GGG	TCT	CAG	GCT	GAT	GAC	CAC	ATC	1681
A	R	R																553
GCC	CGA	CGC																1690

**FIG.12** continued